

CAREER AND TECHNICAL EDUCATION OPPORTUNITIES

Section 36 of 2015 Senate Bill No. 2031 ([appendix](#)) directs the Legislative Management to study the nature and scope of career and technical education opportunities available to students in this state, the manner in which such opportunities are financially supported, and the manner in which such opportunities are monitored to ensure that they provide students with 21st century technical skills that are aligned to industry standards, in addition to providing appropriate academic foundations.

EVOLUTION OF CAREER AND TECHNICAL EDUCATION

At the time of this country's founding, there were three ways in which an individual could be prepared for work. The first way was an apprenticeship program, which could have been voluntary or involuntary. The latter situation came about as a way of addressing child welfare issues. Whether voluntary or involuntary, apprenticeship programs generally provided food, clothing, and shelter; religious instruction; basic instruction in the traditional 3 R's; and instruction in a trade or occupation.

The second way in which an individual could be prepared for work involved a familial relationship, in which the fundamentals of a trade or occupation were handed down from elders to children. The third way involved observation and imitation, but little actual or formal instruction. [See, Wonacott, Michael E., *History and Evolution of Vocational and Career-Technical Education - A Compilation* (2003).]

It was not until the early 1900s that vocational education, as we think of it today, began to emerge. Education literature of that period provides insight as to the reasons for the emergence - reasons that continue to be articulated even in present times.

Public education at the turn of the 20th century was "ill suited and unattractive to the great majority of young people who needed, but did not receive, preparation for work"

Schools in the first decade of the 20th century largely held to the elements of a so-called liberal education. Preparation for college was the intended outcome - an outcome serving fewer than 10 percent of the population. Liberal education was not concerned with making efficient producers

Schools did not adequately serve the needs of youth The equality of opportunity in the system of education was not afforded to the mass of children. Although the schools were freely open to every child, the aims and purposes of the schools were such that a majority of the children were unable to take advantage of schooling beyond a certain grade, and hence did not secure, at public expense, a preparation for their work in life [S]chools were planned only for the few who were preparing for college rather than the large number who would go into industry.

The American school will truly become democratic when we learn to train all kinds of men, in all kinds of ways, for all kinds of things. [See, *id* citing excerpts from Miller, M.D., *Principles and a Philosophy for Vocational Education*, Ohio State University (1985).]

The literature also stated that "[n]ot only would schools be meaningful for more students, but education for employment would help extend the years of education, thereby increasing the level of citizenship of those persons. Vocational education would also make for greater efficiency in production and increase the wage-earning of youth--both boys and girls--by helping them move from noneducative occupations as unskilled laborers to positions as skilled workers sought after by industry. Similarly, training in the scientific principles of farming and the household occupations would contribute to greater efficiency in farming and would strengthen the American home." [See, *id* citing Marshall, F., *Industrial Training for Women*, Bulletin No. 4, New York: National Society for the Promotion of Industrial Education, October 1907.]

The hope was that children who did not respond to "book instruction" might be reached and educated through "learning by doing" and would ultimately be able to connect education with life by making education purposeful and useful.

FEDERAL LEGISLATION - HISTORICAL OVERVIEW

Significant federal intervention in vocational education began with passage of the federal Smith-Hughes Act of 1917, also known as the National Vocational Education Act. Its primary purpose was to provide funds for the training of individuals who have entered upon or who are preparing to enter upon the work of the farm. In

attempting to meet its primary purpose, the legislation required the establishment of a Board of Vocational Education, which in turn caused states to establish a board that was separate from the standard State Board of Education. The result was two distinct governance structures and a decades-long separation of vocational and academic education.

This separation was promoted by another feature of the Smith-Hughes Act, which permitted the expenditure of funds on the salaries of teachers with vocational experience, but not on the salaries of academic teachers. The intent of Congress was to ensure that vocational dollars were not redirected to non-vocational purposes. The practical effect was further polarization of vocational and academic education.

The feature that created the greatest separation in education systems, however, required that schools giving instruction "to persons who have not entered upon employment" dedicate at least half of the instructional time to "practical work of a useful or productive basis, such instruction to extend over not less than nine months per year and not less than thirty hours per week." As a result, if a student was taught one class by a teacher paid in full or in part from federal vocational funds, that student could receive no more than 50 percent academic instruction. In short order, this evolved into the 50-25-25 rule wherein 50 percent of the student's time was spent in the "shop," 25 percent was spent in closely related subjects, and 25 percent was spent in academic courses. This rule became a universal feature of state plans from the 1920s to the early 1960s.

During the 1930s, Congress began to place an emphasis on vocational education within the junior or community college setting. After addressing the unemployment of the 1930s and the war effort of the 1940s, the United States began its transition to a peace-time economy. Beginning in the 1950s, light industries were emerging, as were various health occupations, and with them, there was steady growth in the junior college system and adult education.

During the 1960s, vocational education experienced especially heavy enrollment growth. All the while, technological advances were producing employment dislocation. The gap between the affluent and the disadvantaged widened and poverty in areas of economic depression could no longer be ignored. Congress responded by enacting the Manpower Development and Training Act of 1961, followed by the Vocational Education Act of 1963.

The 1963 legislation continued to encourage the separation of vocational education and academic education. By 1968, however, pertinent amendments were setting aside additional dollars to expand offerings for students with special needs and disadvantaged students. Within a decade, vocational education funding was made available to assist students with limited English language proficiency, to assist Native American students, and to eliminate gender bias and gender stereotyping in vocational education.

Education reforms focusing on secondary education began in the early 1980s, prompted by concern about the nation's declining competitiveness in the international market, the relatively poor performance of American students on tests of educational achievement (both nationally and internationally), and complaints from the business community about the low level of skills and abilities found in high school graduates entering the workforce. This reform came in two waves. The first wave, sometimes characterized as academic reform, called for increased effort from the current education system--more academic course requirements for high school graduation, more stringent college entrance requirements, longer school days and years, and an emphasis on standards and testing for both students and teachers. The basic message might be paraphrased, "work more, try harder, strive for excellence."

Beginning in the mid-1980s, a second wave of school reform arose, based in part on the belief that the first wave did not go far enough to improve education for all students. The second wave, sometimes referred to as "restructuring," called for changes in the way schools and the educational process were organized. While restructuring proposals included school choice and site-based management, of particular interest in this report was the emphasis on improving the school-to-work transition for non-baccalaureate youth by creating closer linkages between vocational and academic education, secondary and postsecondary institutions, and schools and workplaces.

Much of the literature of the time suggests that these reforms were rooted in the National Commission of Excellence in Education's report *A Nation at Risk*. Regardless of the source, the latter half of the 1980s gave rise to more than 275 education task forces across the nation and more than 700 state laws.

At the federal level, the Carl D. Perkins Vocational Education Act of 1984 continued the congressionally held premise that vocational education programs are essential to the nation's future as a free and democratic society.

The act was designed to improve the skills of the labor force, to provide job opportunities for adults, and to provide equal opportunities for adults in vocational education. Its successor, the Carl D. Perkins Vocational and Applied Technology Education Act, was enacted in 1990 and known as "Perkins II." Under Perkins II, the United States Department of Education provided formulaic grants to state boards of vocational education. The distribution of grant funds within a state was directed to priority items established by the state in accordance with an approved state plan for vocational-technical education. Local education agencies and postsecondary institutions were eligible to receive subgrants.

Four years later, Congress enacted the School-to-Work Opportunities Act of 1994. This too was designed to address the nation's shortage of skilled workers by the use of partnerships between educators and employers. School-based and work-based instructional components were integrated with the thought that if students were given knowledge, skills, abilities, and information about specific occupations, as well as the labor market, they would be better equipped to transition from school to work. Key elements of the 1994 act included collaborative partnerships, integrated curricula, technological advances, adaptable workers, comprehensive career guidance, work-based learning, and a step-by-step approach.

In 1998, Congress passed another iteration of the Carl D. Perkins Vocational and Technical Education Act. This time, the Congress focused on two areas--increased accountability and the provision of increased flexibility with respect to the states' use of funds. [See, <http://education.stateuniversity.com/pages/2536/Vocational-Technical-Education.html>.]

The 1998 act was reauthorized in 2006, at which point it became known as the Carl D. Perkins Career and Technical Education Improvement Act. The terminology change from vocational education to career and technical education is one of the major areas that was subject to revision in that reauthorization. Other areas included increasing the focus on the academic achievement of career and technical education students, strengthening the connections between secondary and postsecondary education, and improving state and local accountability.

TRENDS AND ISSUES

Like virtually all other aspects of education in the United States, 21st century vocational education continues to evolve. The utility of a traditional liberal arts education within a college or university setting is being critically examined with respect to young adults whose aspirations may not require a baccalaureate education. The utility of a traditional liberal arts education within a college or university setting is also being critically examined with respect to the preparation of new workers for the 21st century workplace--i.e. immigrants, minorities, and women.

What is not disputed in the current literature is the recognition that innovative educational approaches must be established to provide students with the enhanced skills and knowledge they will need to participate in the international marketplace. This end is achieved by combining a challenging academic curriculum with the development of work-related knowledge and skills. The new combination is designed to keep students' options open after high school, so that they can go to a two-year or four-year college and then work, go to work full-time and then go back to college, or engage in paid employment and further education simultaneously. [See, *id*]